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Kevin M. Pintar

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WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI,
L.L.P.

20333 SH 249 6th Floor
HOUSTON, TX 77070

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KEVIN M. PINTAR, KENNETH ZIERVOGEL, and
JAMES W. MAGILL

Appeal 2008-004755
Application 10/718,863
Technology Center 2100

Decided:¹ June 3, 2009

Before JAMES D. THOMAS, JOSEPH L. DIXON, and
LANCE LEONARD BARRY, *Administrative Patent Judges*.

J. THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 through 26, and 30, with claims 27 through 29 having being withdrawn. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Invention

Techniques to extract, or unload, data from a database table based on a specific version of the table are described. Modern database management systems permit a user to change a databases' table structure or schema in response to changing operating conditions without blocking users' access to the underlying table or its data. Once modified, these database management systems permit data retrieval only in terms of a table's most recent version. Applications written to process a table's data in a first version may not be able to process data when that data is conformed to a later version. By providing a means to extract data from a table based on prior versions of that table, the invention permits users to evolve their database structure as needs require, while maintaining the ability to unload data for historical applications. (Abstract, Spec. 18, Figs. 1, 2)

Representative Claim

1. A database unload method, comprising:
receiving a request to extract data from a database table, the database table having a current version associated with a current schema of the database table and a prior version associated with a prior schema of the database table, the request directed to the prior version; and

extracting data from the database table based on the table schema associated with the prior version.

Prior Art and Examiner's Rejections

The Examiner relies on the following references as evidence of anticipation and unpatentability:

Hayashi	US 5,881,378	Mar. 9, 1999
Herbert	US 6,366,917 B1	Apr. 2, 2002

Claims 1 through 11, 14 through 24, and 30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hayashi. The remaining claims on appeal, claims 12, 13, 25, and 26 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the Examiner relies upon Hayashi in view of Herbert.

Claim Groupings

Based upon Appellants' remarks at the bottom of the principal Brief on appeal that "all claims stand or fall together," we consider independent claim 1 as a representative of the subject matter of independent claims 1, 14 and 30. Additionally, the dependent claims from these independent claims are not separately argued within the Examiner's stated rejection under 35 U.S.C. § 102. Moreover, the additional rejection of certain dependent claims under 35 U.S.C. § 103 is also not separately argued. In this regard, according to the remarks at pages 9 and 10 of the principal Brief on appeal, the dependent claims rejected under 35 U.S.C. § 103 are argued to rely for patentability based upon the same arguments presented for their respective parent independent claims. Therefore, no arguments are presented that Herbert is not properly combinable with Hayashi and no arguments are presented to contest what the Examiner alleges Herbert teaches.

ISSUE

Have Appellants shown that the Examiner erred in finding that Hayashi teaches “extracting data from the database table based on the table schema associated with the prior version” as set forth at the end of representative independent claim 1 on appeal?

FINDINGS OF FACT (“FF”)

1. Appellants’ discussion of the admitted prior art in Paragraph [0003] states that the “overall organization or structure of a table is referred to as its ‘schema’. A schema defines the type and order of a table’s attributes (columns), but does not speak to the data that may actually be stored in the table.”

Continuing their discussion of the prior art, Specification Paragraph [0006] states:

One approach to accommodating a changing schema is to modify the affected applications. . . . Another approach is to extract data from the versioned table, convert the data into a format required by the “target” version (i.e., that version the application was designed to operate with), load the converted data into a temporary table and then run the application against this temporary table.

Thus, running the application against this temporary table necessarily includes the implied ability to extract data from this temporary table.

2. The title of Hayashi’s patent is “DEVICE ACCESSING A DATABASE USING ONE OF OLD DEFINITION INFORMATION AND NEW DEFINITION INFORMATION BASED ON AN ACCESS REQUEST”. Ultimately, according to the end of Abstract of Hayashi, a database definition management means eventually replaces an old version of

database definition information with a new version of it. As set forth in Column 3, lines 59 through 61, Hayashi's summary of invention indicates an object of his invention is to "provide a way to easily realize a process where an access of an application program to a plurality of databases is performed as if it were an access to one database."

3. Within the discussion of the prior art to Hayashi, the discussion beginning at the middle of Column 2 indicates that defining a database means interpreting the database to include modifying the definition of the database. It is further indicated that data itself in the database maybe frequently accessed and modified while the definition of the database is not necessarily modified as frequently. Column 2, line 55 through Column 3, line 2 states:

The usage of a database varies as time goes by. With the fluctuation of the amount of data stored in a database, a storage structure may be required to be modified. The change in the importance of a database and the frequency of access requests may require the modification of the storage structure.

A change in the real environment which reflects on the logical structure of the database may require the modification of the database itself. Simple examples are modification of a column attribute (an eight-digit column must be extended to a 10 digit column due to an increases in numerical size and increase of columns (FAX numbers as well as phone numbers are required). Furthermore, addition or deletion of restrictions for table integrity, and division or integration of a table may be required.

Different definitions within Hayashi appear to yield different schema within "a database."

4. According to the discussion from Columns 7 through 10 of Hayashi, various approaches from the prior art indicate the ability to access independently developed, different databases with the same or different schema associated therewith. This includes the statement at Column 7, lines 33 through 38 we reproduce here:

In the prior art technology, defined schemata are integrated into one database to permit application programs to share data, or defined schemata are organized into independent divisional databases, with an application program prepared for each division, to transmit data through common files.

The discussion across the noted columns indicates the ability to simultaneously access between plural same or different databases with the same or different schemas. Inclusive within this ability is the creation of derived database where it is stated at Column 9, lines 38 through 40, that “[i]n the derived database, a plurality of databases can be simultaneously accessed, thereby simplifying the process procedure.” It is further indicated at Column 9, lines 54 through 56 that “[i]n the test system where a test is conducted between a test database and a production database, a test may be conducted using both databases simultaneously.”

With respect to Figure 7, we note the following discussion at Column 10, lines 14 through 27:

A derived database can be considered a view of a database on a database level similar to a view of a table on a table level.

As shown in FIG. 7, in the prior art technology, an application program can access only one database at a time; for example, an application program 30A can access a database 17A, and an application program 30B access a database 17B. With a derived database, an application program 30C, for example, accesses necessary parts of a plurality of databases

17A and 17B as a derived database 18. When the same table name T exists in a plurality of databases, an alias such as T1 is assigned to identify the table name uniquely.

With respect to Figure 10, Hayashi teaches at Column 15, lines 55 through 59:

As described above, the present embodiment permits an application program to access a plurality of independent databases, thus providing flexible services for diversified and high level user requests. As an application program can access a plurality of databases simultaneously,...

PRINCIPLES OF LAW

Anticipation

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

Obviousness

“What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 419 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* at 417. Appellants have the burden on appeal to the Board to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellants’ Briefs to show error in the proffered *prima facie* case.

ANALYSIS

With respect to the claimed “a database table” this recitation does not necessarily require a single database table and a database itself may be considered to be such a table. The claimed “current version” having a “current schema” does not necessarily distinguish between the recited “prior version” associated with a “prior schema” since both of the versions and the schema are not recited to be different from each other.

As set forth both in the Brief and Reply Brief, Appellants recognize that Hayashi teaches that plural databases may be considered as one database, even as we noted in FF 2. This appears to be the case according to Hayashi’s teachings with or without a derived database. Hayashi can be construed to also teach that different databases, logically being considered as

one database, may be separately or simultaneously accessible, thus permitting separate extractability of data from each of them. FF 3-4.

Given the earlier-noted artisan's understanding of the breadth of the subject matter of representative independent claim 1 on appeal, the Examiner's reliance upon the showings and Figures 11A, 15A, 15B, 17A, 17B permit the accessibility of separate databases logically considered as one database necessarily using the same or different "schema" with databases that have the same or different "versions". Without the claimed current and prior versions being claimed to be different from each other, and without the current and prior schemas being claimed to be different from each other in the claims on the appeal, there are plural perspectives among the teachings of Hayashi that meet the subject matter of representative independent claim 1 on appeal. Note FF 3-4. These even include a single database that has been derived from the database definition management means once an old database definition of a version has been replaced, and therefore deleted, when the new definitional version is ultimately put in place according to the latter teachings and showings in Hayashi and at the end of the Abstract.

Moreover, as noted earlier, Hayashi considers plural databases as logically one database. Thus, the artisan may well conclude, from the Appellants' recognition of prior art approaches noted in Specification page 6 which we reproduced in FF 1, that the noted versioned table and the temporary table can be construed as a single table or "a database table" as claimed to permit two different versions utilizing two different schemas to be accessed, such as to be construed to meet the subject matter of representative independent claim 1 on appeal.

CONCLUSION OF LAW

Appellants have not shown that the Examiner erred in finding that the prior art teaches the feature of extracting data from a database table based on a table schema associated with a prior version.

DECISION

The Examiner's rejections of various claims under 35 U.S.C. §§ 102 and 103, inclusive of all claims 1 through 26, and 30 on appeal, are affirmed. All claims on appeal are unpatentable.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED

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WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI,
L.L.P.
20333 SH 249 6th Floor
HOUSTON, TX 77070